

**Notice of Allowability****Application No.**

10/629,429

**Applicant(s)**

DEMIR, ALPASLAN

**Examiner**

Ted M. Wang

**Art Unit**

2611

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7/31/2006 amendment.
2. ☒ The allowed claim(s) is/are 22-24 and 27-35.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application  |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date <u>10/16/2006</u> . |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date <u>7/31/2006</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment  |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                    | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance                           |
|   | 9. <input type="checkbox"/> Other _____.   |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The references US 6,313,789, US 6,327,257 and US 6,480,558 in the newly filed information disclosure statement (IDS) dated 7/31/2006 have been considered by the examiner. The rest of the listed references are duplicated to the previously filed IDS dated 3/23/2006 that had been considered by the examiner on 6/8/2006. Applicant is advised that the date of any submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

### ***Examiner Amendments***

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.
3. Authorization for this examiner's amendment was given in a telephone interview with Applicant's representative Frederick Koenig III on October 11, 2006.
4. The application has been amended as follows:
- In the claims:

Art Unit: 2611

- Claim 22, line 1, change "AFC" to --- automatic frequency control (AFC) ---, line 16, change "first, second and third" to --- early, punctual and late ---, respectively, and line 18, change --- a combiner configured to combine said first, second and third offset" to --- a summer configured to sum said early, punctual and late offset ---.
- Claim 23, deletes lines 2-5.
- Claim 27, line 6, deletes --- Step 1 ---; and line 12, changes "combiner" to --- summer --- and "combine" to --- sum ---.
- Claim 31, line 33, after "first" inserts--- , ---.
- Claim 32, line 2, changes "on" to --- one --- and "estimator" to --- estimators ---.
- Claim 33, line 3, changes "ISC" to --- ICS ---.
- Claim 34, line 22, deletes --- a ---; lines 26 and 28, changes "ISC" to --- ICS ---, respectively.
- Claim 35, line 3, changes "ISC" to --- ICS ---.

***Allowable Subject Matter***

5. Claims 22-24 and 27-35 are allowed.
6. The following is an examiner's statement of reasons for allowance.
  - The prior art fails to teach an apparatus/method of Claims 22, 27, 28 and 31 that specifically comprises the following:
    - The instant application is deemed to be directed to a non-obvious improvement over the admitted prior art of the instant application and

the invention patented in Pat. No. US 2001/0021199, US 6,532,255 and US 5,574,754. The improvement comprises

With regard claim 22, "a summer configured to sum said early, punctual and late offset estimates to produce the error estimate" as recited in combination with other limitation in claim 22,

With regard claim 27, "first, second and third frequency estimators configured to determine respective early, punctual and late frequency estimates from said early, punctual and late offsets; a summer configured to sum said early, punctual and late offset estimates to produce the error estimate" as recited in combination with other limitation in claim 27,

With regard claim 28, "(e) combining respective pairs of correlations from step (d) to form early, punctual and late estimates, combining the early, punctual and late estimates, and producing a frequency adjustment value from the combined early, punctual and late estimates," as recited in combination with other limitation in claim 28,

With regard claim 31, "a combiner configured to combine the estimates produced by said first, second and third frequency estimators to produce a combined error estimate from which the frequency adjustment value is produced;" as recited in combination with other limitation in claim 31, and

With regard claim 34, "repeater circuitry configured to repetitively operate said phase rotators, correlators, integrator and estimated frequency reviser during ISC processing; and a counter associated with said repeater circuitry to repetitively operate said phase rotators, correlators, integrator and estimated frequency reviser during ISC processing a preferred number of times." as recited in combination with other limitation in claim 34.

7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted M. Wang whose telephone number is (571) 272-3053. The examiner can normally be reached on M-F, 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

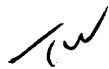
Art Unit: 2611

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

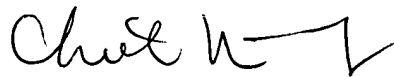
Ted M Wang

Examiner

Art Unit 2611



Ted M. Wang



CHIEH M. FAN  
SUPERVISORY PATENT EXAMINER